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Background

Law enforcement officers are required to perform physical tasks as part of their occupational duties.[1]

These tasks, which can include chasing and wrestling with offenders in unpredictable situations, can lead to a variety of injuries.[1]

As poor fitness is associated with an increased risk of injury,[2] return-to-work programs need to progress to a level that can return an officer to these task requirements.

However, the progression within this training must be structured so as not to reinjure the officer and the correct fitness requirements must be targeted.

Purpose

To investigate relationships between general fitness assessments and specific law enforcement occupational assessments in order to inform return-to-work planning for injured Sheriff's deputy law enforcement officers.

Methods

Retrospective data were collected from US Sheriff deputies attending patrol school.

- *n*=91 male; age= 41.69±7.17 years; height = 178.28±6.77 cm; mass=95.17±16.95 kg: and
- *n*=6 female; age= 42.50±7.12 years: height = 169.55±6.51 cm; mass=82.35±18.11 kg.

The deputies completed general fitness and measures of:

- *Muscular power (vertical jump [VJ] & 20 yard sprint [20SP]),*
- *Muscular endurance (maximum push-ups (1PU) and sit-ups (1SU) in 1-min),*
- *Strength (hand grip strength [GS]: leg/back dynamometer pull [LBPull]), and*

The deputies also completed *occupational* measures of:

- *A 2.2 m fence jump;*
- *8.5 m victim drag, and*
- *a get-up task.*

Person's correlations were run to determine the relationships between the fitness and occupational measures with alpha set at 0.05 a priori.

The Bond University Human Research Ethics Committee approved this archival data study.

Results

The power and speed measures (VJ and 20SP) exhibited the strongest relationships to all occupational tasks;

- *fence jump*
  (VJ r=-.609, 20SP r=.556),
- *victim drag*
  (VJ r=-.522, 20SP r=.657),
- *get-up*
  (VJ r=-.609, 20SP r=.539).

This was followed by the muscular endurance

- *(1PU and 1SU) measures;*
- *fence jump*
  (1PU r=-.408, 1SU r=-.477),
- *victim drag*
  (1PU r=-.396, 1 SU -.392),
- *get-up*
  (1PU r=-.414, 1SU -.545).

The strength measures (GS and LBPull) were only related to

- *victim drag*
  (GS r=-.352, LBPull r=-.328)
- *get-up*
  (GS r=-.247, LBPull r=-.203).

Discussion

The results from this study indicated that general fitness measures were related to occupation-specific assessments in Sheriff's deputies, although the strength of the relationship varied.

Improvements in measures of lower body muscular power (e.g. jumping), speed (e.g. sprinting), and upper-body and abdominals muscular endurance may help prepare injured law enforcement officers for more arduous occupational tasks as part of their return-to-work programming.

Of note, these general fitness measures may provide an indication of physical readiness to begin more advanced occupationally specific assessment tasks for injured law enforcement officers.

Implications

General fitness measures of muscular power, speed and muscular endurance may be of use in early return-to-work rehabilitation to guide preparedness to undertake more workplace-specific tasks in Sheriff deputies.

References

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